

**WHAT IS CLAIMED IS:**

1. A method for transmission over packet networks, the method comprising:
  - detecting, at a first node, at least one next node;
  - creating a channel between the first node and the at least one next node;
  - receiving, at the first node, a first packet;
  - detecting a protocol of the first packet;
  - merging the first packet with a second packet of the same protocol as the first packet; and
  - transmitting the merged first packet and second packet to the at least one next node via the channel.
2. The method of claim 1 wherein the first packet contains circuit-based information.
3. The method of claim 1 wherein the second packet contains circuit-based information.
4. The method of claim 1, further comprising:
  - determining whether available bandwidth exceeds a predetermined threshold.
5. The method of claim 4, wherein the predetermined threshold is set to provide a minimum level of quality of service for voice communications.
6. The method of claim 4, further comprising:
  - rejecting a communication related to the first packet.
7. The method of claim 4, wherein the predetermined threshold is set to provide a minimum level of quality of service for data communications.
8. The method of claim 1 wherein the node is an existing media gateway.

9. The method of claim 1 wherein node is connected to a circuit-switched voice network.

10. An internet trunking protocol node comprising:  
a channel interface for assigning a channel to a next node;  
a port for transmitting and receiving a plurality of packets to and from the next node;  
a processor for performing instructions in response to received packets; and  
a memory, in communication with the processor, for storing a plurality of instructions, wherein the instructions comprise:  
instructions, responsive to the receipt of a packet, for detecting a protocol of the packet;  
instructions for merging a plurality of packets of the same protocol into a merged packet;  
instructions for splitting a packet comprised of a plurality of packets of the same protocol;  
instructions for routing packets according to an internet protocol.

11. The internet trunking protocol node of claim 10 wherein the port is connected to a packet communications voice network.

12. The internet trunking protocol node of claim 10 wherein the port is connected to a second media gateway through the packet communications voice network.

13. The internet trunking protocol node of claim 10 wherein the port is connected to a common packet communications voice network.

14. The internet trunking protocol node of claim 10 wherein at least one of the plurality of packets contains circuit-based information.

15. A method for establishing voice communication over packet networks, the method comprising:  
receiving an internet protocol packet at a node in communication with a plurality of nodes;

splitting the internet protocol packet into a plurality of ITP packets, wherein each ITP packet of the plurality of ITP packets contains circuit-based information;

for each of the plurality of ITP packets,  
determining a next node to which the ITP packet is to be transmitted;

determining whether available bandwidth to the next node exceeds a predetermined threshold;

assigning a channel to the ITP packet; and

if there is a second ITP packet that is to be transmitted to the next node, merging the second ITP packet with the ITP packet.